

MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for February, 1900, is based on reports from about 3,103 stations furnished by paid and voluntary observers, classified as follows: regular stations of the Weather Bureau, 158; West Indian service stations, 12; special river stations, 132; special rainfall stations, 48; voluntary observers of the Weather Bureau, 2,562; Army post hospital reports, 27; United States Life-Saving Service, 9; Southern Pacific Railway Company, 96; Canadian Meteorological Service, 32; Mexican Telegraph Service, 20; Mexican voluntary stations, 7. International simultaneous observations are received from a few stations and used, together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Hawaiian Government Survey, Honolulu; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Señor A. M. Chaves, Director-General of Mexican Telegraphs; Mr. Maxwell Hall,

Government Meteorologist, Kingston, Jamaica; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; and Capt. J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local meridian is mentioned.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

February, 1900, opened with temperature 20° to 30° below the seasonal average over the greater part of the country east of the Mississippi River. The line of zero temperature reached the Ohio River, and the temperature was 6° and 4° below the freezing point at Mobile, Ala., and Jacksonville, Fla., respectively.

From the 6th to the 9th a severe cold wave overspread practically all districts west of the Allegheny Mountains. During the 7th this cold wave was attended by high winds and heavy snow in the Western and Northwestern States, and in the Rocky Mountain regions as far south as northern New Mexico and northwest Texas, and by heavy frost in the valleys of California. On the 8th and 9th the cold wave covered the central valleys and the Lake region, attended by snow and gales over the western Lake region and the upper Mississippi and lower Ohio valleys, and by freezing temperature to the Texas coast. In the Atlantic coast States this cold wave was not severely felt.

During the 12th and 13th a cold wave advanced over the West and Northwest States, carrying the line of freezing temperature to central Texas, and causing heavy snow in the extreme Western States and the Lake region. On the 14th this cold wave was supplemented by a marked fall in temperature in the extreme Northwest, and from that date until the 18th the crest of this unusually severe cold wave moved southward and eastward to the Gulf and Atlantic coasts, attended on the 16th and 17th by heavy snow in the Middle Atlantic

and south New England States, and on the 17th by heavy snow and gales in the north Atlantic States. On the 16th the temperature fell to 24° at Mobile, Ala., to 26° at New Orleans, La., and Galveston, Tex., and to 30° at Corpus Christi, Tex., and the line of zero temperature was traced to southern Illinois, southern Missouri, and southern Kansas. At New Orleans, La., the coldest weather of the winter prevailed from the 16th to 19th. By the morning of the 18th the temperature had fallen to 18° at Jacksonville, to 28° at Tampa, and to 38° at Jupiter, Fla.

From the 23d to 25th a cold wave swept rapidly eastward and southeastward over the Lake region, the Ohio Valley, and the Middle Atlantic and New England States, attended the night of the 23d and during the 24th by high winds and heavy snow in the Lake region; and on the 27th and 28th the weather was very cold over the Lake region and the middle and upper Mississippi Valley.

Ample and timely warnings were sent to all sections visited by these cold waves. In New Mexico the warnings of the 6th prompted precautionary measures which saved a number of human lives and prevented the loss of live stock and perishable produce. In the valleys of California and in southern California special warnings of the heavy frost of the 7th were widely distributed. In the sugar and vegetable growing districts of the middle and west Gulf States thousands of dollars were saved by protective measures which were taken upon the receipt of the warnings of freezing weather. Announce-